

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
1 September 2005 (01.09.2005)

PCT

(10) International Publication Number
WO 2005/079951 A1

(51) International Patent Classification⁷: B01D 46/00,
B29C 70/76

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(21) International Application Number:
PCT/GB2005/000555

(22) International Filing Date: 16 February 2005 (16.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0403413.8 17 February 2004 (17.02.2004) GB

(71) Applicant (for all designated States except US): NATIONWIDE FILTER COMPANY (SPECIALIST PRODUCTS) LIMITED [GB/GB]; NFC House, Vickers Industrial Estate, Mellishaw Lane, Morecambe, Lancashire LA3 3DY (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): WOOD, Frederick, Ian [GB/GB]; Dennow Farm, Firs Lane, Appleton, Warriington, Cheshire WA4 5LF (GB).

(74) Agent: ATKINSON, Peter, Birch; Marks & Clerk, Sussex House, 83-85 Mosley Street, Manchester M2 3LG (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FILTER UNIT

(57) Abstract: A method of forming a filter unit comprised of a filter element and an encircling peripheral encasement frame to which the filter element is sealed. The frame is moulded *in situ* by solidification of a liquid, solidifiable moulding composition (e.g. a curable resin or a matter thermoplastic resin that solidifies on cooling) provided around the periphery of the filter element. The method may comprise the steps of: (i) providing a filter element having front and rear faces and a bounding peripheral edge, (ii) locating around the peripheral edge of the element a mould unit which seals against peripheral regions of the front and rear faces and which together with the peripheral edge defines a mould cavity, (iii) filling the mould cavity with a solidifiable, liquid moulding composition, (iv) effecting conversion of the liquid to a solid, and (v) removing the mould thereby producing the filter element.

WO 2005/079951 A1